

Water and Energy Conservation in the Bathroom

By installing and implementing tools that conserve water, the hospitality sector can save Arizona's precious resource and, in turn, lower the utility bill considerably. The guest bathrooms in the hospitality sector consume approximately 34% of water in the entire facility.¹ Use these resources to research efficient equipment and other green practices that will save water and energy in bathrooms.

When looking for water efficient products, look for the EPA WaterSense label. WaterSense products have reduced water usage through improved water use efficiency, and perform the same or better than regular products.²



Tips for Bathrooms

Toilets

The toilet is the biggest culprit of extreme water consumption. A single toilet used by one person (installed prior to 1994) uses 6,388 gallons or more per year.³ Purchasing a high efficiency model will reduce water use by 45%, consuming just 2,920 gallons a year.³ With hotels and resorts housing many bathrooms, the hospitality sector has the opportunity to optimize water savings at the source of one of the largest water consumption components in a community.

To maximize conservation and savings, consider a WaterSense toilet and the many alternative new toilets offered today such as a dual flush, tank-less and water-less urinals.⁴ If full renovations are not feasible due to budget restrictions, a quick fix to minimizing water used by toilets is to add a toilet tank ball or float booster. This low-cost attachment will reduce the water used in the tank, can be easily installed and can pay for itself with the water you save.

Is It Just a Toilet Leak?

One small drip leak can equal over 1,600 additional toilet flushes or 3,000 gallons per year.⁵ Just two small leaking units could result in wasting hundreds of dollars a year in unused water escaping down the drain.⁶

Schedule a semi-annual leak check for all pipes, toilets, and faucets. One simple leak detection test in toilets is to place a dye in the top tank and, without flushing, observe if dye enters the toilet bowl.

Showerheads

In the hotel bathroom, water management for showers can be a challenge considering shower lengths vary for guests. Low flow showerheads are a perfect way to minimize water usage despite the time uncertainty. Their low flow can reduce water used by 25 gallons every 10 minutes.⁷ This simple switch saves money and will still provide the same comfort of the previous model by maintaining high water pressure.⁴

Faucets

Water faucets can use up to 2.2 gallons per minute (gpm). However, choosing a WaterSense certified faucet can lead to 30

percent water savings after installation.⁸ Switching to motion sensor faucets or metered faucets will assure that the water is only running when needed. Additionally, motion sensor faucets can lower the spread of diseases in the establishment.⁴ These are a great option for any public restroom that is maintained on the main floor of the hotel, as well as within the guest rooms. If the renovations are not feasible, a low-cost alternative to conserve water is through the use of aerators. Aerators can be retrofitted to cut water usage down from 2.5 gpm to 1.5 gpm after installation.⁹ These are cost-effective and can be attached to a current faucet.



Diverters

Bath and shower diverters eliminate the possibility of wasted water that leaks before and after usage.¹⁰ The small drops of water escaping into the tub and then to the drain can amount to hundreds of dollars in lost resources. Updating bathroom diverters will reduce future maintenance and will save tens of gallons of water with every installation. In guest suites, consider purchasing EPA WaterSense Bath and Shower Diverters to maintain a higher standard of leak prevention than typical market diverters.¹¹

Retrofitting and Replacing Lighting

Implementing energy efficient lighting is a perfect outlet for cost savings and improving the lifespan of your recent purchase. Switch to more reliable LED and CFL lights that last 3 to 25 times longer than other lamps.¹² Optimal LED energy-saver lamps will use 75% less energy than the typical incandescent lamp.¹³

Plan to replace old T12 lamps with T5 where LED and CFLs are incompatible. Retrofitting bathroom lighting to be more environmentally friendly creates several opportunities for rebates. Contact SRP, APS or your local utility provider for rebates after retrofitting.

Lighting Disposal

When the time has come for older lightbulbs to be replaced it is important to keep in mind proper disposal techniques. The hotel uses hundreds of lights that run throughout guest bathrooms, which means there may be hundreds of lights containing glass and metals that can be recycled and disposed of as well. Visit Arizona's recycling locator at azrecycles.gov to find a facility near you for light bulb recycling.

For more information regarding lighting in the hospitality sector see our **Resource Summary on Energy Efficient Lighting, Occupancy Sensors and Programmable Thermostats.**¹²



Tips for Improvement

Educate your staff by:

- Providing training on new water saving procedures
- Setting target goals for water usage that are manageable with the clear understanding of your initial water usage quantity¹²
- Creating a policy to have monthly staff reviews on the established water saving procedures and updating staff of recent water saving statistics
- Installing reminder signs in staff areas to conserve water
- Acknowledging highly motivated staff members who continually perform to the best of their ability to conserve water

Conduct a water audit in order to:

- Track your hotel's water usage by contacting your local water provider or use your preferred auditor method (internal, third party, etc.)¹⁴
- Track your progress monthly and annually as your hotel saves more and more
- Record money saved with energy and water efficiency, and review annually

References

¹ *Annual Water Consumption in Hotels*. Green Hotelier.

² *WaterSense*. EPA.

³ *Indoor Toilet*. Conserveh2o.org.

⁴ *Conservation Technologies*. Arizona Department of Water Resources.

⁵ *Fix a Leak Week*. EPA WaterSense.

⁶ *Repair Your Leaking Toilets*. NYC Department of Environmental Protection.

⁷ *Green Hotel Shower Solutions*. Green Hotelier.

⁸ *Bathroom Faucets*. EPA WaterSense.

⁹ *Best Management Practices: Faucets and Showerheads*. U.S. Department of Energy.

¹⁰ *Water Efficiency Management Guide - Bathroom Suite*. EPA WaterSense.

¹¹ *Bath and Shower Diverters*. EPA WaterSense.

¹² *How Energy Efficient Light Bulbs Compare with Traditional Incandescent*. U.S. Department of Energy.

¹³ *LED Lighting*. U.S. Department of Energy.

¹⁴ *The Water Audit Process*. Alliance for Water Efficiency.